7. Natural Gas

7.1 Natural Gas Use in New Hampshire

Natural gas (often referenced as "gas" in the New Hampshire Energy Plan) is a natural mixture of hydrocarbons found issuing from the ground or obtained from specially driven wells. Natural gas arrives in New Hampshire via interstate pipelines, which are in turn supplied directly by wells or by specialized tanker ships. It is then delivered to industrial, commercial and residential customers through a series of supply distribution pipelines. In New Hampshire, natural gas is used for the generation of electricity, is used for heating of buildings and hot water, powers a number of manufacturing processes, and has a number of other applications. Natural gas is currently available to approximately 53 communities in New Hampshire, serving about 100,000 customers.

7.2 ENERGY2020 Base Case Forecast for Natural Gas

In general, oil, natural gas, and coal supply are included in the model based on the EIA/DOE primary energy price forecast and the historical delivery costs (by product) within New Hampshire and New England. While gas pipeline access is a potential issue in New Hampshire, pipeline constraints are not. Therefore, gas pipeline flow dynamics are not included as part of the New Hampshire Energy Plan process. The model does consider the fraction of the population (and businesses) with access to natural gas.

Table 7.1. Forecast of New Hampshire Natural Gas Demand, by Price Scenario

Natural Gas Demand (Tbtu/Year)						
	2000	2005	2010	2015	2020	20-Year Average
Base Case Comparison						
Base Case	86.23	129.12	152.08	184.38	207.51	**158.28**
High Price	86.23	129.12	154.66	183.65	211.42	**159.18**
Difference	0.00	0.00	2.58	-0.73	3.90	**0.91**
Percent Change	0.00%	0.00%	1.70%	-0.40%	1.88%	**0.47%**

7.3 Demand for Natural Gas

In both the Base Case scenario and the High Price scenario, consumption of natural gas is expected to increase dramatically over the next decades. Demand is predicted to grow from 86 trillion British Thermal Units (tBtu) in 2000 to over 200 tBtu in 2020. This growth, predicted at between 4% and 5% per year, is expected to occur at a fairly steady rate.

7.4 Natural Gas Supply Issues

Absent the construction of a new commercial natural gas power plant beyond those expected to be online in 2002, existing capacity is sufficient to meet the anticipated needs of New Hampshire businesses and residents for the next decade. With the exception of facilities already permitted and under construction, no new large-scale users of natural gas are expected in the state, and the Energy2020 model does not forecast construction of any plants in New Hampshire for over ten years. While supply appears adequate for anticipated demands, there are many businesses, and a large majority of residences, without access to natural gas. Expansion of natural gas infrastructure to significant new service areas has the potential to place demands upon the existing supply infrastructure, but no such expansions are currently underway.

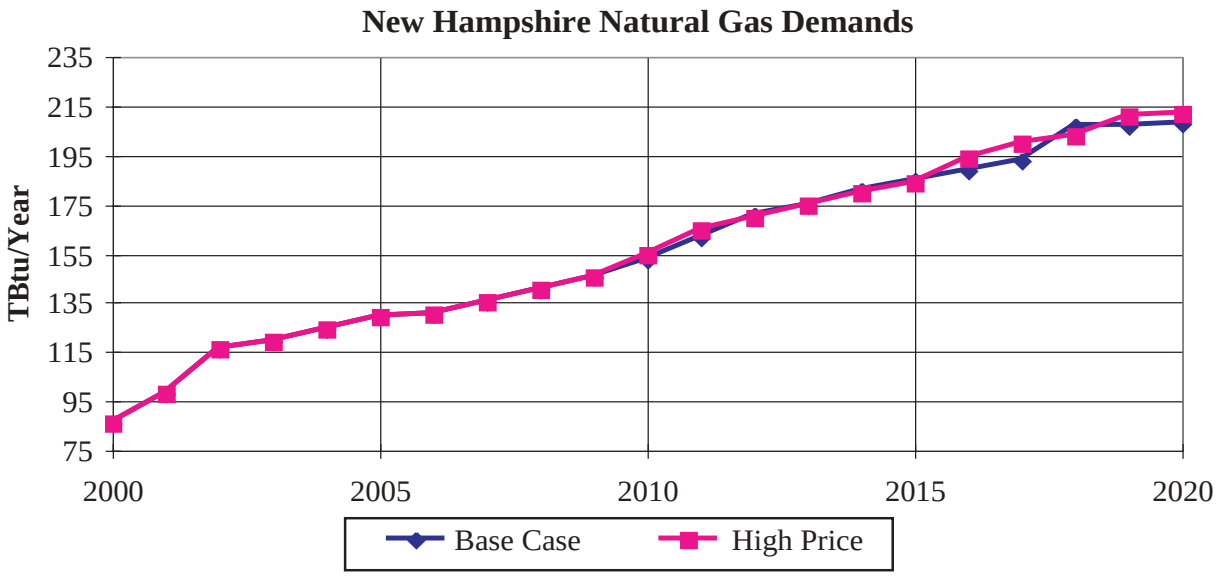

Figure 7.1 Forecast of New Hampshire Natural Gas Demand, by Price Scenario

7.5 Policy recommendations

Natural gas will play an increasing role in New Hampshire's, and New England's energy use. Both supply and demand for natural gas are predicted to rise over the next decade and beyond. This will provide New Hampshire with reduced emissions compared to many other forms of generation, an even more diverse fuel supply than currently enjoyed by the state, and added electricity generation.

New Hampshire policy makers and regulators will need to carefully monitor the growth in natural gas use, and ensure that the infrastructure used to support natural gas delivery is sufficient to meet our needs. Current modeling shows that existing pipeline capacity is more than sufficient to meet demands over the next decade. However, events such as a new generation facility or a great increase in heavy manufacturing could cause demand in excess of the ability to provide natural gas.

New Hampshire should also consider ways to provide more residential customers with access to natural gas. Providing another choice for heating and other uses provides for a more competitive marketplace, and allows residential customers to make decisions based upon price, reliability, environmental impacts and other considerations.